

Application No.: 10/757,847

### REMARKS

Reexamination and reconsideration of this application is respectfully requested in light of the foregoing amendments and the following remarks.

Claims 1, 3, 8 and 10-14 are pending in this application. Claims 2, 4-7 and 9 have been canceled without prejudice or disclaimer. Claims 10-14 have been withdrawn from consideration due to a restriction requirement. No new claims have been added. No new matter has been added to the application. Support for the amendment to claim 1 can be found in original claim 2 and in the specification at p. 4, line 16; p. 10, line 23 to p. 11, line 4; p. 15, lines 4-5; and p. 17, line 14.

Applicant notes the Examiner's consideration of the information cited in the Information Disclosure Statements filed January 16, 2004 and September 20, 2004 as acknowledged in the Office Action Summary. Applicant further notes the Examiner's acknowledgment of Applicant's claim for foreign priority under 35 U.S.C. § 119 and receipt of the certified priority document.

### Rejection of Claims 1-5, 8 and 9

Claims 1-5, 8 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Okino et al. (Japanese Publication No. 407070713A). Claims 2, 4, 5 and 9 have been canceled, thereby rendering the rejection as to these claims moot.

Claim 1 has been amended to incorporate the limitation of claim 2, namely that the square value does not exceed 1.8. See p. 4, line 16 or p. 15, lines 4-5 of the specification. Claim 1 has also been amended to add a lower value for the amount of manganese in the alloy composition so that the range is now from 0.05 to 0.60%. Support for this range can be found at p. 10, line 23 to p. 11, line 4 of the specification. Claim 1 has been further amended to recite

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that the ratio,  $\text{Mo}/(\text{Mo}+0.5\text{W})$ , is not less than 0.75. Support for this limitation can be found at p. 17, line 14 of the specification.

Claim 1 requires that the value of the square of the difference between the Ni amount and the Co amount, and the Ni amount not exceed 1.8. This limitation is not disclosed or suggested by Okino et al. The Examiner appears to rely on an inherency theory on the ground that since the composition in the Table on page 4 of the reference discloses an alloy composition "which closely meet[s] the claimed [alloy] composition," the prior art alloy satisfies the limitations set forth in claim 1. The position taken by the Examiner is a conclusion, and not based on cogent scientific reasoning from the teachings of the reference. The Examiner has not presented an explanation based on the teachings of Okino et al. as to how and why a person having ordinary skill in the art would have been led such a person to the claimed composition, i.e., an alloy composition that meets the square value limitation. Further, the rejection does not set forth any basis that would have motivated such a person to select amounts of Ni and Co and prepare a composition meeting the square value limitation.

Claim 1 also requires that the ratio,  $\text{Mo}/(\text{Mo} + 0.5\text{W})$ , be not less than 0.75. This limitation also is not disclosed or suggested by Okino et al. There is nothing in Okino et al. that would have led a person having ordinary skill in the art to an alloy composition that meets the ratio as claimed. There is no teaching, suggestion or motivation for such a person to select Mo and W and formulate the ratio as claimed. Further, the Examiner has not presented any cogent scientific reasoning that the compositions disclosed in Okino's would meet this limitation in the claim and that a person having ordinary skill in the art would have been motivated to prepare a composition having the claimed ratio. Moreover, Applicant has found that Mo is more

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preferable than W in the claimed alloy composition, i.e., the alloy recited in claim 1 has a higher amount of Mo than W, in contrast to Okino et al. which shows a higher amount of W in their alloy composition. Based on this disclosure, there would have been no motivation by a person having ordinary skill in the art to include a higher amount of Mo than W in the alloy.

For all of the foregoing reasons, Okino et al. fails to present a *prima facie* case of obviousness of claim 1. Since claims 3 and 8 are dependent on claim 1, these claims would also be patentable if claim 1 is patentable. Moreover, Okino et al. do not disclose, let alone suggest, that their compositions could include B or Re as required by claim 3. The Examiner has not presented any cogent reasoning from the teachings of Okino et al. that would have led a person having ordinary skill in the art to be motivated to include B with or without Re in the composition.

Accordingly, for all of the foregoing reasons, it is respectfully requested that the rejection of claims 1, 3 and 8 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

#### **Rejection of Claims 6 and 7**

Claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Okino et al. (Japanese Publication No. 407070713A) and "Introduction to Steels and Cast Irons" publication (Table 1.1). Claims 6 and 7 have been canceled, thereby rendering this rejection moot.

#### **Rejection of Claims 1-7**

Claims 1-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukazawa et al. (Japanese Publication No. 357207161A). Claims 2 and 4-7 have been canceled, thereby rendering the rejection as to these claims moot. The Examiner appears to be asserting that

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because the claimed alloy wt% ranges overlap and the alloy is useful in manufacturing turbine components, the reference meets the square value and ratio limitations of claim 1. Applicant respectfully disagrees.

The English abstract of the reference is silent on the utility of the alloy. It does not disclose that the disclosed alloy is useful to make turbine components as asserted by the Examiner. In addition, as discussed *supra*, claim 1 requires a limitation on the square value and a specific lower limit for ratio range for  $Mo/(Mo + 0.5W)$ . These limitations are not disclosed or suggested by Fukazawa et al.

Claim 1 requires that the value of the square of a difference between the Ni amount and the Co amount, and the Ni amount not exceed 1.8. Fukazawa et al. do not recognize, let alone disclose or suggest, the claimed relationship between Ni and Co as claimed. Further, the Examiner has not provided any cogent scientific reasoning from teachings of the reference that would have motivated a person having ordinary skill in the art to consider the special relationship between Ni and Co as claimed.

As for the ratio of  $Mo/(Mo + 0.5W)$ , Fukazawa et al. do not disclose this ratio, let alone suggest that a special relationship exists between Mo and W in the alloy composition. Moreover, the Examiner has not presented any cogent reasoning from the teachings of the reference that a person having ordinary skill in the art would have been motivated to recognize the relationship between Mo and W as claimed.

Accordingly, for all of the foregoing reasons, it is respectfully requested that the rejection of claims 1 and 3 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

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### Rejection of Claims 8 and 9

Claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukazawa et al. (Japanese Publication No. 357207161A) and "Introduction to Steels and Cast Irons" publication (Table 1.1). Claim 9 has been canceled, thereby rendering the rejection as to this claim moot. Since claim 8 is dependent on claim 1, the arguments presented *supra* as to the deficiencies of Fukazawa et al. with respect to square value and ratio limitations in claim 1 are incorporated herein by reference. The "Introduction to Steels and Cast Irons" publication does not make up for the deficiencies of Fukazawa.

The publication describes elements that can be added as ingredients to steel and what property changes can be expected. The reference does not disclose or suggest the particular square value relationship of Ni and Co in the claimed alloy composition. Nor does the publication disclose or suggest the ratio relationship of Mo and W in the claimed alloy composition. Moreover, the Fukazawa does not present any teaching that would have motivated a person having ordinary skill in the art to add Cu, Al, Zr, Hf, Ca, Mg, Y and a rare earth element to their alloy composition. The suggestion could only have come from Applicant's disclosure.

For all of the foregoing reasons, the rejection does not present a *prima facie* case of obviousness of claim 8 over the combined teachings of Fukazawa et al. (Japanese Publication No. 357207161A) and "Introduction to Steels and Cast Irons" publication. It is respectfully requested that the rejection be reconsidered and withdrawn.

### Rejection of Claims 1-4, 6, 8 and 9

Claims 1-4, 6, 8 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Usuda et al. (Japanese Publication No. 3582117661A), Fukazawa et al. (Japanese Publication

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No. 357207161A) and Okino et al. (Japanese Publication No. 407070713A). Claims 2, 4, 6 and 9 have been canceled, thereby rendering the rejection as to these claims moot. The deficiencies of Okino et al. and Fukazawa et al. have been addressed *supra* in previous rejections. The arguments presented therein are equally applicable here and are incorporated herein by reference. Usuda et al. does not make up for the deficiencies of Okino et al. and Fukazawa et al. Usuda et al. taken alone or in combination with Okino et al. and Fukazawa fails to disclose or suggest the invention recited in claim 1.

As previously noted, claim 1 has been amended to incorporate the limitation of claim 2, namely that the square value set forth in original claim 1 does not exceed 1.8. Claim 1 has also been amended to recite that the ratio  $Mo/(Mo+0.5W)$  is not less than 0.75. Neither of these limitations are disclosed or suggested in the combined teachings of the references. The deficiencies of Okino et al. and Fukazawa et al. with respect to these limitations have been discussed *supra*. Usuda et al. also fails to teach or suggest these limitations.

Claim 1 requires that the value of the square of a difference between the Ni amount and the Co amount, and the Ni amount not exceed 1.8. The Examiner has not presented any cogent reasoning from the teachings of Usuda et al. as to how and why a person having ordinary skill in the art would have arrived at or would have been motivated to arrive at and recognize the special relationship between Co and Ni as set forth in claim 1.

Claim 1 also requires that the ratio,  $Mo/(Mo + 0.5W)$ , be not less than 0.75. This limitation also is not disclosed or suggested by Usuda et al. There is nothing in Usuda et al., and the Examiner has not pointed to any teaching in the reference, that would have led a person having ordinary skill in the art to an alloy composition that meets the ratio as claimed between

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Mo and W. There is no suggestion or motivation from the teachings of Usuda et al. that would have led such a person to select Mo and W from the components of the alloy and formulate the ratio as claimed. Further, the Examiner has not presented any cogent scientific reasoning that the alloy compositions in Usuda's disclosure or the combined teachings of Usuda et al., Fukazawa et al. or Okino et al. would have led a person having ordinary skill in the art to recognize the relationship between the amounts of Mo and W to arrive at the claimed ratio. As noted *supra*, Applicant has found that Mo is more preferable than W in the claimed alloy composition, i.e., the alloy composition recited in claim 1 has a higher amount of Mo than W.

In addition to the above, Usuda et al. do not disclose, let alone suggest, that their alloy compositions could include Mn as required by claims 1, 3 and 8, or B or Re as required by claim 3. The Examiner has not presented any cogent reasoning from the teachings of Usuda et al. that would have led a person having ordinary skill in the art to be motivated to include Mn and/or B with or without Re in the prior art alloy composition.

For all of the foregoing reasons, the combined teachings of Usuda et al., Fukazawa et al. or Okino et al. fail to present a *prima facie* case of obviousness of claim 1. Since claims 3 and 8 are dependent on claim 1, these claims would also be patentable if claim 1 is patentable. Accordingly, it is respectfully requested that the rejection of claims 1, 3 and 8 under 35 U.S.C. § 103(a) over the combined teachings of Usuda et al., Fukazawa et al. or Okino et al. be reconsidered and withdrawn.

### Conclusion

For the foregoing reasons, it is submitted that the claims 1, 3 and 8 are patentable over the teachings of the prior art relied upon by the Examiner. Accordingly, favorable

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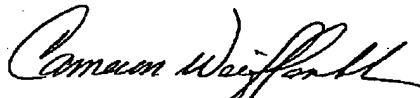
reconsideration of the claims is requested in light of the preceding amendments and remarks.  
Allowance of the claims is courteously solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. § 1.17 and due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



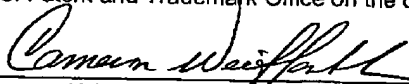
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